Design and construction of a filling and capping process control system using PLC Fx3U via C# interface

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Abstract: In the context of increasingly powerful automation technology development, this topic focuses on designing and building a control system for the product filling and capping process using the PLC Fx3U through a C# interface. The objective of the research is to address the issue of instability in the filling and capping process, thereby improving the quality and reliability of the production process. The methodology is based on a combination of theoretical research on the PLC Fx3U and experimental implementation of the C# interface. The expected result is an efficient automation system, widely applicable in the food processing and pharmaceutical industries, bringing significant economic and technical benefits.

Keywords: PLC Fx3U, automation, C# interface, filling, capping